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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,334	02/22/2000	Toshikazu Ohshima	2355.11105	1732

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EXAMINER

MOSSER, ROBERT E

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8M

Office Action Summary	Application No.	Applicant(s)	
	09/510,334	OHSHIMA, TOSHIKAZU	
	Examiner	Art Unit	
	Robert Mosser	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,8-11,13,16,18 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,8-11,13,16,18 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION



Responsive to the amendment filed August 23rd, 2004.

Claims 1, 3, 5, 8-11, 13, 16, 18, and 29 are pending.

This action is final.



Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **1, 3, 5, 8-11, 18, and 29** are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (5,638,300).

With regards to at least claims **1, 5, 18, and 29**, Johnson teaches a golf swing analysis system including:

a first sensor (Figure 1,2 & Elm 6, 18) attached to the head of a user for detecting the "position" and "orientation" of said head (Col 3:44-48 & Col 3:64-4:6);

a second sensor attached to a second portion of the user separate and different from the first portion user for detecting the "position" and "orientation" of the second portion (See Figure 1 & 2 and note multiple uses of element 6 on multiple position on the user's body);

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an estimating unit/step arranged to estimate a relative position of the second portion with respect to the position and orientation of the first portion in accordance with the results of detection by said first and second sensors (Col 4:1-6 & 4:39-44);

a generation unit/step arranged to generate action information on the basis of a transition of the estimated relative position (Figures 18,19 - menu system & Col 7:9-18-motion capture);

a determination unit/step arranged to determine a user instruction corresponding to the generated action information(Col 10:41-54, Col 8:27-67); and

an image (message) generating unit/step arranged to generate an image on the basis of said user instruction (Col 10:54-55).

With regards to claim 3, the association of the second sensor being attached to the hand is interpreted as being satisfied by sensor 20 located at the handle of the club. As the player grasps the handle of the club during operational use in similar fashion in which the remaining sensors are affixed to the user during operation, the sensor is viewed as being implicitly attached to the hands.

With regards to claim 8, the "action information" as described by Johnson in Column 7 lines 9-27, contains the spatial position (understood to include orientation as presented above) information for each sensor and thus by definition must include the respective orientation information between multiple sensors.

With regards to claim **9**, the inclusion of the moving direction and location of the second portion with respect to the first portion would necessarily be encompassed in the sequence of frames recorded as cited in the address of claim 8 and further supported in the description of purpose for the prescribed approximate frame rate starting on line 15 of column 7.

With regards to claim **10** as best understood, the process contained there in has been interpreted to refer to the analysis of the "transition" or movement of the sensor respective positions based on a discrete time frame and the association of instruction values with this analysis. As such the real time analysis model is provided for Johnson's analysis method as set forth in at least column 10, line 49 through line 55, as well as the menu system provided for in figure 4 and Column 7:27-67.

With regards to claim **11**, the separation of the determined user instruction into a plurality of instruction operands by the determination unit is considered encompassed in Johnson's analysis set forth above (and through Col 10:15-12:23). In particular the separation of this analysis into discrete instructions maybe considered emphasized in column 10 lines 10 through 19 with at least the separation of the analysis into warning messages. As well as presented in the menu system of Johnson (Figure 3,4 & Col 8:27-67)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5,638,300) as applied to claim 1 above in further view of Cozza (US 5,655,223).

Johnson teaches all features of the invention disclosed above but is silent regard the use on sensors to determine the bend angle of a finger. In an electronic golf glove training device Cozza teaches the incorporation of sensors into a glove and used to train a user in the proper grip of a golf club (Abstract & Figure 1-4). It would have been obvious to one of ordinary skill in the art at the time of invention to utilize the position sensors of Johnson in the glove of Cozza in order measure the player grip for later analysis.

Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5,638,300) as applied to claim 1 above in further view of Brostedt et al (US 5,984,684).

While Johnson teaches all features of the invention disclosed above and the displaying on a display device (38), Johnson is silent regarding the use of a head-mounted display. In a related method and system for teaching physical skills Brostedt teaches the use of a head-mounted display (101). It would have been obvious to one of ordinary skill in the art at the time of invention to use the video glasses (head mounted display) of Brostedt et al in the place of the monitor of Johnson to eliminate the necessity for the student to change his field of vision to view a video monitor (Col 2:49-52).

Response to Arguments

Applicant's arguments filed August 23rd, 2004 have been fully considered but they are not persuasive.

Applicant argues on page 8 of their remarks, that Johnson is silent regarding estimating a relative position of a second portion of a user with respect to the position and orientation of a the user's head in accordance with the result of detection by first and second sensors attached to a user, generating action information on the basis of a transition of the estimated relative position, and determining a user instruction corresponding to the generated action information.

Johnson however, does in fact teach the limitations as claimed. Johnson teaches a multiple sensor assembly worn by a user (Figures 1 & 2) for tracking the position of the user (Col 7:9-17). The claimed generation of action information has been equated to this tracking function and may be further expanded upon through column 7:20 through 8:2 of Johnson which describes the process of motion capture and

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analysis and not a calibration step as asserted by the applicant (Applicant's remarks pages 8-9). The calibration step of Johnson is described in column four from line 30 onward.

The generation of action information and the determination of a user instruction based thereon is taught in the user's interface with a training system through club motion. Specifically the user interacts with a menu shown in figure 4 through the positioning of the golf club and in response to this positioning the system determines the corresponding instruction in accordance with the position. . This process is further described in Column 8 lines 27 through 67.

Applicant submits that the estimation of position of Johnson is relative to a fixed reference point and not relative to the position of a second sensor. However in so much as there is a common reference point between the sensors of Johnson the sensor positions may readily be understood as relative to one another. The position of the sensors is tracked (Col 6:32-33) in a Cartesian coordinate system (X,Y,Z), and hence the given location of a first sensor (2,0,0) with respect to any other given sensor (0,2,0) is relative to that sensor even when tracked with respect to another position (0,0,0). If the applicant intends to further this point it is strongly suggested that they consider incorporating additional functionality into the present claims, which might serve to separate the claimed invention from the prior art.

Challenges of the reference to sampling of Johnson presented in Column 7:9-18 may be further supported by column 7 line 20 though column 8: line 67 which explain the process from position capture through system interface in significant detail.

The reference to the determination of a user instruction maybe equally applied to the menu system as set forth above as well as the swing comparison previously presented. For as the instruction (warning message) is presented to the user based based on the user's action it may readily be considered to be resultant of an "instruction by the user"

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

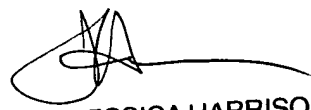
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Mosser whose telephone number is (571)-272-4451. The examiner can normally be reached on 8:30-4:30 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris H Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

REM



JESSICA HARRISON
PRIMARY EXAMINER